

REMARKS

Claims 1-22 are presented for examination, with Claims 1 and 12 being in independent form. Favorable reconsideration is requested.

Claims 1-5, 8-16, and 19-22 have been rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent Application Publication No. US 2001/0021223 (*Andrew*) in view of European Patent Application No. EP 1 069 764 A2 (*Hidetaka*); Claims 6 and 17, as being obvious from *Andrew*, *Hidetaka*, and *Christopoulos* (the publication entitled “The JPEG2000 Still Image Coding System: An Overview”, IEEE Transactions on Consumer Electronics, Vol. 46, No. 4, pp. 1103-1127, 2000); and Claims 7 and 18, as being obvious from *Hidetaka* in view of *Christopoulos* and further in view of *Nayyar* (U.S. Patent Application Publication No. US 2002/0012471 A1).

Claim 1 is directed to a method of defining qualities for a digital image signal encoded beforehand, including defining a plurality of quality modes each corresponding to at least one decoding parameter of the digital signal, on the basis of rate information provided via a graphical interface and perception quality information provided via a visualization of the decoded digital signal. A digital image in a given one of the quality modes is obtained by decoding the digital image signal encoded beforehand using at least one decoding parameter corresponding to the given quality mode. All of the quality modes defined and only the quality modes defined are made accessible to a final user.

Among other notable features of Claim 1 are defining a plurality of quality modes each corresponding to at least one decoding parameter of a digital signal encoded beforehand, in which a digital image in a given one of the quality modes is obtained by

decoding the digital image signal encoded beforehand using at least one decoding parameter corresponding to the given quality mode.

The general nature of *Hidetaka* has been discussed adequately in previous papers, and it is not believed to be necessary to repeat that entire discussion. Briefly, *Hidetaka* relates to compression parameters, i.e. encoding parameters, in order to define different image qualities, whereas Claim 1 recites defining quality modes “each corresponding to at least one decoding parameter of the digital signal.” In other words, *Hidetaka* fails to teach or suggest defining a plurality of quality modes each corresponding to at least one decoding parameter of a digital signal encoded beforehand, in which a digital image in a given one of the quality modes is obtained by decoding the digital image signal encoded beforehand using at least one decoding parameter corresponding to the given quality mode, as recited in Claim 1.

Andrew, as understood by Applicants, relates to a method for recovering image memory capacity in relation to an image which has been encoded using a linear transform according to a layer progressive mode, in practice using the JPEG2000 format. An image is encoded with a given number of layers and a given progression order (see paragraph 0065). *Andrew* discusses setting the number of layers at 5 during the encoding step.

Therefore, as in *Hidetaka*, the number of layers in *Andrew* is an encoding parameter. Indeed, *Andrew* discloses that the “selected five image layers are constructed so that the reconstructed image quality ranges from low quality to lossless quality (ie reconstructed without loss) corresponding to 1 to 5 layers respectively” (see paragraph 0067).

Thus, nothing in *Andrew* would teach or suggest a method of defining qualities for a digital image signal encoded beforehand, as recited in Claim 1, since the quality layers are defined at the encoding stage.

In addition, it is discussed in paragraph 0069 of *Andrew* how the quality layers are constructed in the encoding stage: they are obtained by encoding the coefficients of the subbands obtained by orthogonal transform (such as a wavelet transform) by applying various levels of precision, which are predetermined.

Since *Andrew* discusses the construction of quality layers at the encoding stage, in a conventional manner for JPEG2000, Applicants submit that it would not be obvious to a person having ordinary skill in the art to determine the plurality of quality modes “on the basis of rate information provided via a graphical interface and perception quality information provided via a visualization of the decoded digital signal”, as recited in Claim 1, since, in *Andrew*, the image signal has not been encoded yet. In this respect, Applicants respectfully disagree with the Examiner’s statements at page 3 of the Office Action, second and third paragraphs. In particular, Applicants disagree that the above feature “was exceedingly well known in the art,” as asserted by the Examiner.

Nothing in *Andrew* or *Hidetaka*, whether considered either separately or in any permissible combination (if any) would teach or suggest defining a plurality of quality modes each corresponding to at least one decoding parameter of a digital signal encoded beforehand, on the basis of rate information provided via a graphical interface and perception quality information provided via a visualization of the decoded digital signal, in which a digital image in a given one of the quality modes is obtained by decoding the

digital image signal encoded beforehand using at least one decoding parameter corresponding to the given quality mode, as recited in Claim 1.

Accordingly, Claim 1 is seen to be clearly allowable over *Andrew* and *Hidetaka*, whether considered either separately or in any permissible combination (if any).

Independent Claim 12 recites features which are similar in many relevant respects to those discussed above in connection with Claim 1, and accordingly, Claim 12 is believed to be patentable for at least the same reasons as discussed above in connection 1.

A review of the other art of record, including *Keeney*, has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, he is respectfully requested to contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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